

BIBALVES

Baltic tellin
Macoma balthica



Description (shell):

Shell broadly oval, umbones more or less on midline; anterior hinge line and margin regularly convex, posterior hinge line and margin slightly attenuated. Sculpture of numerous, fine, concentric lines; growth stages clear, usually marked by bands of colour. Two small cardinal teeth in each valve, the right posterior and left anterior being bifid. No lateral teeth. Adductor scars and pallial line distinct, cruciform scars unclear; pallial sinus irregular, deep, lower edge largely fused with pallial line (*M. balthica*-drawing).

Size:

Up to 25 mm long.

Colour:

Colour very variable: white, yellow, pink, or purple, in various shades, unicolorous or banded. Periostracum light brown, most conspicuous at margins. Inner surfaces glossy; white, pink, or purplish.

Animal:

Animal is yellowish, tinged with brown. Long, separate siphons, the uppersiphon is larger than the lower. Foot is powerful. Mantle fringed with tentacles.

Habitat:

Burrows in soft substrata, particularly in estuaries and on tidal flats, where it may be abundant; intertidal only.

Distribution:

Distributed from the White Sea south to Spain and Portugal (Distr. *M. balthica*).

Feeding Types:

Deposit feeder
Suspension feeder

Elliptical Trough
Spisula



Description (shell):

Shell thin, elongate oval, umbones close to midline. Sculpture of fine concentric lines and grooves, growth stages clear. Lunule and escutcheon poorly defined, the former perhaps most distinct. Right valve with two separate, but closely spaced cardinal teeth and paired, elongate anterior and posterior laterals. Left valve with three cardinal teeth: the anterior two forming a single forked structure extending almost to edge of the hinge plate, the third small and indistinct; with single anterior and posterior laterals. Interlocking surfaces of lateral teeth serrated. Chondrophore posterior to cardinal teeth. Adductor scars and pallial line distinct, pallial sinus oval, extending to a point below and beyond midline of posterior lateral teeth (*S. elliptica*-drawing).

Size:

Up to 30 mm long.

Colour:

Dull white with greenish or greyish brown periostracum. Inner surfaces glossy, white.

Animal:

The animal has a thick mantle with fringed edges. The siphons are short and united throughout their length, but the exhalent tube is fitted with a tubular valve. The foot is large, tongue shaped and very extensible, used for burrowing and leaping (*S. elliptica*-animal).

Habitat:

In mixed soft substrata, offshore to about 100 m.

Distribution:

Common in the whole North Sea (Distr. *S. elliptica*). Distributed northwards to the Barents Sea.

Feeding Types:

Suspension feeder

Donax
Donax vittatus



Description (shell):

Shell roughly wedge-shaped, umbones posterior to midline. Dorsal margin sloping gently anteriorly from umbones, continuous with rounded anterior margin; posteriorly sloping more steeply, posterior margin bluntly pointed. Ventral margin distinctly crenulate, visible from both sides of each valve. Sculpture of fine concentric grooves and numerous fine radiating striations. Growth stages clear. Right valve with two cardinal teeth, the anterior small, the posterior broad and bifid; left valve with two slender cardinal teeth, the anterior weakly bifid. One anterior and two posterior lateral teeth in right valve; single small, anterior and posterior laterals in left valve. Adductor scars, pallial line, and cruciform muscle scars only lightly impressed. Pallial sinus broadly oval, extending to midline of shell (D. vittatus-drawing).

Size:

Up to 35 mm.

Colour:

White, yellowish, light brown, or purple, frequently lighter about the umbones, with pale radiating rays and often with pigmented bands along growth lines. Periostracum light brown to olive-brown, glossy. Inner surfaces glossy, white, often tinted purple, yellow or orange, with growth stages showing as pale bands.

Animal:

The animal is very agile, of a purplish red or yellow colour; the siphons are pale orange. The mantle edge is fringed; short thick diverging siphons and a very large and pointed sharp-edged foot.

Habitat:

In sand, from the lower shore into the shallow sublittoral.

Distribution:

Distributed from Norway south to the Mediterranean and north-west Africa (Distr. D. vittatus).

Feeding Types:

Suspension feeder

Stripped Venus
Venus striatula



Description (shell):

Shell is solid, thick, equivalve and broadly triangular in outline with a round anterior margin but tending to be slightly drawn out posteriorly. Inequilateral, beaks are in front of the midline. Ligament is narrow, exposed, not extensive, reaching one-third of the way to the posterior margin. Lunule is short, heart-shaped, light brown with fine radiating ridges. Escutcheon is elliptical, extensive, reaching almost to the posterior margin; with fine radiating lines. Sculpture of numerous concentric ridges, not normally overlapping each other: in the depressions between each ridge there are fine concentric lines. The concentric ridges are closely packed near the ventral margin. There are three cardinal teeth in each valve and no laterals. Pallial sinus is not deep. Inner margin is crenulate from below the beak forward to the posterior margin of the escutcheon.

Size:

Up to 4.5 cm in length.

Colour:

Dirty white, cream or pale yellow, occasionally polished, usually with three red-brown rays of varying width, radiating from the umbones, these may occasionally merge into each other or break up into irregular linear patterns. Periostracum is thin.

Animal:

The animal is white and white filaments which fringe the mantle are disposed in tufts. The foot is large and tongue-shaped, adapted in burrowing. Siphons are long and slender and they are united almost throughout.

Habitat:

Inhabits bottoms of clean sand and muddy sand, from above low water-mark to 55 metres.

Distribution:

Very common in the North Sea. It is distributed from the Lofoten Isles, south to the Iberian Peninsula, the Mediterranean and the Black Sea, along the Atlantic coast of Morocco and to Madeira and the Canary Isles (Distr. *C. striatula*).

Rayed Trough
Mactra coralline



Description (shell):

Shell thin and brittle, oval, umbones just anterior to midline. Sculpture of very fine concentric lines, growth stages clear. Shell margin prominent. Hinge line: lunule and escutcheon absent. Right valve with two cardinal teeth, the anterior parallel to hinge line, and paired, elongate anterior and posterior laterals. Left valve with three cardinal teeth, anterior two joined to form a single, widely forked structure, the third poorly developed, and single elongate anterior and posterior laterals. Chondrophore triangular, posterior to the cardinal teeth in each valve, with a small dorsal septum isolating it from the external ligament. Adductor scars and pallial line indistinct; pallial sinus broad and rounded, not extending far into shell.

Size:

Up to 50 mm long.

Colour:

White, tinted purple about the umbones, with light brown rays of varying width radiating from umbones; periostracum light brown, thin. Inner surfaces glossy, white, tinted purple.

Animal:

Colour white tinged with blue. The animal has a thick mantle fringed with white filaments. The siphons are short, their mouths fringed with yellow or red filaments; united throughout their length, but the exhalant tube is fitted with a tubular valve. The foot is large, tongue shaped, and very extensible, used for burrowing and leaping.

Habitat:

Burrowing in clean sand, from the lower shore into the shallow sublittoral.

Distribution:

Widespread, and often abundant (Distr. *M. stultorum*). Distributed from Norway to the Mediterranean and West Africa.

Feeding Types:

Suspension feeder

Pullet Carpet Shell
Venerupis pullastra



Description (shell):

Shell elongate, oval to quadrate, umbones distinctly anterior; hinge line sloping anteriorly, straight posteriorly, forming a sharp angle with posterior margin. Sculpture of very fine concentric lines and radiating striations, equally developed, with the concentric element predominant posteriorly. Growth stages clear. Lunule elongate, shallow, escutcheon narrow. Each valve with three cardinal teeth: centre one of left valve, and centre and posterior of right are bifid. Adductor scars and pallial line distinct. Pallial sinus deep, U-shaped, extending beyond midline of shell; posteriorly, the lower limb of the pallial sinus may be confluent with the pallial line for a short distance (*V. senegalensis*-drawing).

Size:

Up to 50 mm long.

Colour:

Cream, light fawn to brown, in irregular patches, bands, and rays, usually darkest close to posterior margin. Inner surfaces glossy white, often tinted blue or purple beneath umbones and along posterior margin.

Animal:

Varies in colour from white to grey and yellow. The mantle margins may be waved or jagged. (*V. senegalensis*-animal).

Habitat:

A shallow burrower in mixed sandy bottoms, usually attached by abyssus. From the lower shore into the shallow sublittoral.

Distribution:

Distributed from northern Norway to the Mediterranean and north-west Africa (Distr. *V. senegalensis*).

Peppery Furrow Shell
Scrobicularia plana



Description (shell):

Shell thin and brittle, oval, umbones just anterior to midline. Sculpture of numerous, fine concentric lines and grooves. Internal ligament supported in each valve by a triangular, backwardly directed chondrophore; two small cardinal teeth anterior to chondrophore in right valve, a single one in left. Adductor scars and pallial line not readily apparent in fresh material. Pallial sinus broad, lower edge largely fused with pallial line; posteriorly, cruciform muscle scars may be apparent (S. plana-drawing 2).

Size:

Up to 65 mm long.

Colour:

Dull white, yellowish, or grey, usually darkest about the growth lines. Periostracum thin, conspicuous only at margins. Inner surfaces glossy, white or yellowish (S. plana-drawing).

Animal:

(S. plana-animal).

Habitat:

Intertidal only, burrowing in soft substrata in estuaries and tidal flats, in conditions of fluctuating salinity. Often abundant.

Distribution:

Widely distributed, ranges from Norway to the Mediterranean and West Africa (Distr. S. plana).

Feeding Types:

Deposit feeder
Suspension feeder

Scallop & Queenies
Chlamys sp.



Description (shell):

Shell thin, more or less oval. Inequivalve: right valve with a distinct, rounded byssal notch in anterior ear, with fine teeth on lower border. Inequilateral: both valves with anterior ear more pronounced, twice as long as posterior. Sculpture of 25-35 bold ribs, and a few corrugated concentric lines, raised into prominent spatulate spines along ribs, most pronounced close to margin. Ears similarly ribbed. Growth stages usually clear (*C. varia*-drawing 2). Sculpture visible on inner surface, margin crenulate.

Size:

Up to 60 mm long.

Colour:

Colour very variable, from off-white, through yellow and orange to brick-red, purple, or brown, often with bands or patches of darker or lighter colour. Very young stages usually unicolorous. Inner surface of shell glossy, often coloured same as exterior (*C. varia*-drawing).

Animal:

Attached by byssus when young, but may become free later. Mantle with a double margin, the inner finely fringed and the outer edged with long tentacles. About 30 eye-spots at the base of the tentacles.

Habitat:

From lower shore to about 100 m. Often grows enclosed by algal holdfasts.

Distribution:

Widespread and common in the North Sea (Distr. *C. varia*). Present in the Mediterranean, distributed south to west Africa.

Feeding Types:

Suspension feeder

Faroe Sunset Shell
Gari fervensis



Description (shell):

Shell thin, elongate, more than twice as long as broad. Umbones anterior to midline; anterior hinge line forming a smooth continuous curve with anterior margin, posterior hinge line sloping more steeply, forming a sharp angle with truncate posterior margin. A distinct keel extends posteriorly from the umbone to postero-ventral corner of each valve. Sculpture of numerous, fine concentric grooves, growth stages clear. Right valve with two cardinal teeth, the anterior grooved, posterior distinctly bifid; left valve with a large, bifid anterior cardinal, and a slender posterior cardinal. Adductor scars and pallial line distinct, cruciform muscle scars unclear. Pallial sinus deep, U-shaped, its lower edge largely fused with the pallial line (*G. fervensis*-drawing).

Size:

Up to 50 mm long.

Colour:

Dull white, yellowish, fawn, or shades of red, pink, or purple; usually inconcentric bands of different intensity, with a few white or cream rays radiating from umbones. Periostracum light or dark brown, persisting as a coarse band around margins. Inner surfaces glossy, white tinted with pink or purple.

Animal:

Burrows with the large foot usually extended as well as the long and separate siphons. Mantle-edges are fringed.

Habitat:

In mixed sand or gravelly bottoms, from the lower shore downwards.

Distribution:

Distributed from Norway to the Mediterranean and West Africa (Distr. *G. fervensis*).

Feeding Types:

Suspension feeder

Common paddock
Pholas dactylus



Description (shell):

Shell thin and brittle, elongate oval, umbones anterior to midline; antero-ventral margin deeply concave about a large, elliptical pedal gape, posterior margin regularly rounded, not gaping. Both valves strongly convex anteriorly. Sculpture of concentric ridges and radiating lines, produced as prominent tubercles where they intersect, most pronounced anteriorly; growth stages distinct in larger specimens. Umbonal reflection pronounced, with ten or more vertical septa linking it with umbone. Dorsal margin with a broad, oval protoplax, a small mesoplax and an asymmetric metaplax overlying the right side (*P. dactylus*-drawing). Apophysis broadening towards its free edge, extending from beneath umbo, in each valve, halfway towards the ventral margin (*P. dactylus*-drawing 2). Adductor scars and pallial line clear, pallial sinus deep, U-shaped.

Size:

Up to 150 mm long.

Colour:

Dull white or grey, periostracum yellowish, often discoloured. Inner surfaces white.

Animal:

The animal is whitish. The siphons are large, united nearly to the fringed orifices and covered with a brown or speckled sheath. The foot is flattened, the rasp-like forepart assists in boring. The hinge-plate is continued outside, and folds over the upper margin of the shell, where it is protected by a portion of the mantle. To protect the mantle, the accessory plates cover it at this part. The animal is somewhat club-shaped.

Habitat:

Bores into a wide range of substrata including wood, peat, compacted sand, and various soft rocks. Lower shore and shallow sublittoral.

Distribution:

Ranging to the Mediterranean and north-west Africa (Distr. *P. dactylus*).

Feeding Types:

Deposit feeder
Subsurface feeder
Grazer feeder

Mussel

Mytilus edulis



Description (shell):

Shell solid, equivalve; inequilateral, beaks at the anterior end. Shell approximately triangular in outline. Hinge line without teeth, but with 3 to 12 small crenulations under the umbones. External ligament much concealed, extending more than half-way from the beaks to the highest point of the shell. Sculpture of fine concentric lines; growth stages clear. Pallial line wide; anterior adductor scar very small, posterior one large. Margin smooth.

Size:

Length variable: commonly 50-100 mm, although many populations rarely reach 30 mm, and largest shells up to 150-200 mm.

Colour:

Colour light horn to blue or purple, dark purplish blue when older; small specimens often marked with pale blue and brown rays on a translucent ground. Periostracum thick, deep blue to black, occasionally dirty brown, glossy where new, often abraded over much of the anterior end. Inner surface of shell white below ligament, progressively blue and dark, towards a deep purplish black posterior margin (*M. edulis*-drawing).

Animal:

The mantle has a double margin, the outer one plain, the inner is at different parts fringed or toothed and on the hinder part formed into an imperfect siphon. Colour of the mantle edge of living specimens is typically yellow-brown. Strongly gregarious in its habits. Widely cultivated and used as food.

Habitat:

Attached by a byssus issuing ventrally, close to umbones, *M. edulis* occurs in dense beds from upper shore and into the shallow sublittoral (*M. edulis* bed).

Distribution:

Widespread and common in the whole North Sea (Distr. *M. edulis*). It ranges from Arctic waters south to the Mediterranean.

Feeding Types:

Suspension feeder

Saddle oyster
Anomia sp.



Description:

Shell brittle, fragile, roughly circular, the posterior margin frequently bluntly produced; often rather irregular when attached to an uneven substratum. Left valve convex, often deeply cupped and overlapping the right valve (A. ephippium-drawing); with three distinct scars on inner surface, in an oblique line, in concavity of shell (A. ephippium-inside). Right valve thin, flat, or irregularly concave, with elliptical byssal aperture dorsally; single adductor scar postero-ventral to byssal aperture. Sculpture of wavy concentric lines, often raised as irregular scales. Growth stages usually clear, except in older shells when they may be obscured by incrustations or, on the left valve, worn smooth.

Size:

Up to 60 mm.

Colour:

Colour white or grey, occasionally with a pink or bluish tinge.

Animal:

Varies in colour from yellow to red and brown. As the animal lives usually solitarily attached to the underlying surface, it can develop its shell pretty equally in all directions; the mantle follows the outline of the shell and is therefore more or less circular, its margins fringed with two or three rows of yellowish filaments. The white cylindrical foot is very small.

Habitat:

From the lower shore to at least 150 m and perhaps to the edge of the continental shelf. Attaches to various hard substrata, including other molluscs, and to algal holdfasts.

Distribution:

Widespread and common on hard substrata (Distr. A. ephippium). Occurs also in the Mediterranean; distributed from Iceland to West Africa, and to the South Atlantic Islands.

Common cockle
Cerastoderma edule



Description (shell):

Shell broadly oval. About 24 broad ribs, and closely spaced concentric ridges; ridges on ribs may be developed as flattened, scale-like spines. Growth stages distinct. Each valve with two small cardinal teeth; right valve with two anterior and two posterior laterals. Adductor scars and pallial line distinct; in larger specimens the posterior adductor and areas around it, may be tinted chestnut or light purple. External sculpture visible as grooves extending from ventral margin, fading rapidly beyond pallial line (C. edule-drawing 2).

Size:

Up to 50 mm long.

Colour:

Cream, light yellowish, or pale brown; periostracum yellowish or greenish. Inner surfaces dull white, brown, thin (C. edule-drawing).

Animal:

The animal has a white body, but the mantle is pale yellow, its edges with a short white fringe. The short siphons are separate throughout, with white filaments along their sides. The white or yellow foot is proportionately small, though long, and ends in a thin flat point (C. edule-animal).

Habitat:

In sandy mud, sand or fine gravel, from mid-tidal level to just below ELWS. Tolerant of salinities as low as 10‰ and often abundant in sheltered bays and estuaries.

Distribution:

Common in the North Sea (Distr. C. edule). Distributed from north-east Norway to West Africa.

Feeding Types:

Suspension feeder

Prickly Cockle and Spiny Cockle
Acanthocardia sp.



Description (shell):

Shell brittle, obliquely oval, anterior hinge line sloping gently to convexanterior margin; posterior hinge line more steeply inclined, posterior margin only slightly convex. 18-23 ribs, each with a sharp central keel, regularly produced into erect, sharp spines, continuous basally with keel. On small specimens the spines are little more prominent than the keel, in later growth stages the keel is less obvious; old specimens may have both severely eroded; spines most prominent on anterior ribs. Concentricsculptures of numerous wavy ridges, pronounced between ribs, less so on them. Growth stages clear. Two cardinal teeth in each valve; right valve with two anterior and one posterior lateral teeth, left valve with single anterior and posterior laterals, the anterior being longer, thicker, and more prominent than posterior one. External sculpture visible on inner surfaces as grooves which extend the whole depth of shell. Adductor scars and pallial line indistinct (*A. echinata*-inside).

Size:

Up to 75 mm long.

Colour:

Light fawn to deeper brown, in concentric bands, often darker or bluish-tinged along posterior margin. Periostracum thin, typically stained greyish by fine sediment. Inner surfaces white, glossy, occasionally bluish beneath umbones (*A. echinata*-drawing).

Animal:

The animal varies in colour from white to pink. The gills are long and much folded back. The siphons are rather long. The flesh-coloured or redfoot is large, long and finger shaped, twice the length of the shell. Themantle margins are jagged. Pigment spots serving as visual organs are scattered over the margins of the mantle and over the siphons.

Habitat:

In fine sand and gravel, usually with mud, offshore.

Distribution:

Common in the North Sea, ranges from Norway to the Mediterranean and the Canary Isles (Distr. *A. echinata*).

Razor shells
Ensis silique
Ensis ensis
Pharus legume



Description (shell):

Shell thin and brittle, dorsal and ventral margins distinctly and symmetrically curved about midline of shell; anterior margin rounded. Sculpture of fine lines following growth stages. Left valve with two, projecting peg-like cardinal teeth, and two elongate, posterior laterals, situated one above the other; right valve with one short cardinal and a single, elongate posterior lateral. Adductor scars and pallial line clear; anterior adductor elongate, dorsal, extending to below ligament, posterior small and round, well-spaced from pallial sinus (*E. ensis*-drawing).

Size:

Up to 130 mm long.

Colour:

Dull white or cream, with pale reddish or purplish brown streaks and spots; periostracum glossy, light to dark olive or green. Inner surfaces white, often tinted blue or purple.

Habitat:

Burrows in fine sand on the lower shore and in the shallow sublittoral.

Distribution:

Distributed from Norway south to the Mediterranean and north-west Africa (Distr. *E. ensis*).

Feeding Types:

Suspension feeder

Native Flat Oyster
Ostrea edulis



Description (shell):

Shell thick and solid, but often brittle and flaking easily when dead. Shape variable: typically oval or pear-shaped, or circular when young, becoming irregular, freely influenced by substratum and often distorted. Left valve often deeply cupped, with coarse concentric sculpture, frequently developed as flat scales, and crenulated bands marking growth stages; numerous irregular, radiating ribs give a crenulated effect to margin; surface often abraded, or encrusted. Right valve usually more brittle than left, with well-marked concentric sculpture but lacking ribs. Adductor scar elliptical or comma-shaped, smooth-surfaced, white or yellowish white (*O. edulis*-inside).

Size:

Up to 100 mm long, rarely larger.

Colour:

Colour off-white, yellowish, or cream, with light brown or bluish concentric bands on right valve. Inner surface of both valves pearly, white or bluish grey, often with darker blue areas marking inclosures of detritus.

Animal:

At early stage of existence the left valve becomes cemented to a stone, an older shell or some other object on the bottom. The animal has no foot, because it is not needed for locomotion or for spinning a byssus. The mantle has a double margin with a fine fringe. The lips are large and nearly triangular. The solitary muscle for closing the valves is placed nearly in the centre of the shell. Left on their natural banks the animals are full-grown in about four years, but when dredged and laid down again in the culture beds they take several years longer. High commercial value as edible delicacy. (*O. edulis*-animal).

Habitat:

From the lower shore to about 80 m.

Distribution:

Widely distributed around the British Isles, as indigenous populations or introduced stocks. Occurs naturally from Norway south to the Mediterranean (Distr. *O. edulis*).

Sand gaper
Mya arenaria



Description (shell):

Shell thick and strong, oval, umbones just posterior to midline; anteriorend regularly rounded, posterior somewhat tapered. Sculpture of fine concentric lines, becoming coarser and more corrugated close to margins, also a few, faint, radiating striae. Growth stages clear. Left valve with a prominent spatulate chondrophore, projecting at a right angle to hinge line, with a distinct tooth-like ridge along its posterior edge. Right valve with a concave, spatulate chondrophore recessed beneath umbo. Adductor scars and partial line distinct; anterior scar elongate, posterior rounded (M. arenaria-drawing 2).

Size:

Up to 150 mm long.

Colour:

Off-white, yellowish, or fawn, dark greyish brown about the umbones; periostracum light brown, often stained by iron deposits. Inner surfaces white (M. arenaria-drawing).

Animal:

The siphons are connected throughout their total length and though they may be completely withdrawn into the shell, they are usually fully extended. This has caused the hinder end of the shell to gape widely. These animals are deep burrowers and the foot is positioned downwards, while the siphons reach straight up through sand or mud to the water above (M. arenaria-animal).

Habitat:

In sand, often mixed with mud or gravel, on the lower shore and offshore to about 20 m. Often very common in estuaries, where it may occur in extensive beds.

Distribution:

Circumboreal, not reaching the Mediterranean (Distr. M. arenaria).

Feeding Types:

Suspension feeder

Arctic Cypina
Arctica islandica



Description (shell):

Shell thick and strong, broadly oval, with prominent umbones. Periostracum typically brittle and peeling readily in largest shells. Anterior hinge line strongly curved, lunule ill-defined; escutcheon shallow, occupied by a thick, arched, brown or black, ligament. Sculpture of concentric lines and few irregular grooves, growth stages distinct. Right valve with three prominent cardinal teeth and a single posterior lateral tooth; triangular pit in front of anterior cardinal, surrounded by small knobs and ridges. Left valve with three cardinals and one posterior lateral, anterior cardinal continuous with a series of small ridges and denticulations. Inner surfaces smooth, glossy; adductor scars distinct, posterior one slightly larger than anterior one. Ventral margin crenulate (A. islandica-drawing).

Young specimens appear rather different from older ones, the periostracum tending to be smoother and lighter in colour; umbones are relatively less prominent and the shells appear to have a more oval and less tumid shape.

Size:

Up to 120 mm long.

Colour:

Dull white with a thick periostracum: glossy chestnut-brown in smaller individuals, deep greenish brown to black in large specimens.

Animal:

Colour of a creamy tint. The mantle forms two short tubes behind, whose mouths are fringed with delicate tentacles. The long foot is broad at the base, but runs to a sharp point. By the aid of this powerful foot the animal burrows in the muddy sand, but not deeply, as may be gathered from the shortness of the tubes (A. islandica-animal).

Habitat:

In sand and muddy sand; offshore, perhaps to the edge of the continental shelf.

Distribution:

From Arctic waters to the Bay of Biscay (Distr. Ar. islandica).

Feeding Types:

Suspension feeder

GASTROPODS

Common limpet

Patella vulgata

Patella spp.



Description (shell):

Shell conical with irregular radiating costae. Apex central or slightly anterior; apical angle variable, smaller (70-80°) in high shore specimens, larger (105-115°) in low shore and young animals (*P. vulgata*-drawing).

Size:

Up to 60 x 50 x 30 mm.

Colour:

White or grey externally. Inner surfaces grey-green.

Animal:

Distinct head with mouth, paired tentacles and eyes. Mantle skirt fringed with translucent pallial tentacles arranged in three series of different lengths, internal to which lies a complete circlet of pallial gills (*P. vulgata*-animal).

Habitat:

From between MHWST-MHWNT downward to ELWST on all suitable rocky shores; upper limit of distribution increased by shade and exposure (*P. vulgata*-photo). Tolerant of low salinity but generally confined to habitats with salinity >25 ‰.

Distribution:

Distributed from Mediterranean to Lofoten Islands, Norway (Distr. *P. vulgata*). Also reported off Helgoland by K. Janke (Harms, 1993).

Woodie Canoe
Scaphander lignarius



Description (shell):

Shell solid, glossy, opaque; sculpture of spiral lines, crossed by longitudinal lines, with pigment distributed along some of the lines (*S. lignarius*-drawing).

Size:

Up to 45 mm. Total length up to 60 mm.

Colour:

Green, yellow, or brown.

Animal:

Body white or orange. Head very short, squat, indented anteriorly; tentacular processes smooth, short, conical. Parapodial lobes extending from anterior end of head shield to about middle of shell; pallial lobe also visible. Burrower, preying on infaunal worms and lamellibranchs (*S. lignarius*-animal).

Habitat:

In muddy sand; sublittoral, to 700 m.

Distribution:

Common in the North Sea (Distr. *S. lignarius*).

Dog Whelk
Nucella lapillus



Description (shell):

Shell is solid, oval-conic, with short, straight-sided or slightly coeloconoidspire. Whorls are slightly tumid, last whorl large (80 % or more of shellheight); sutures are shallow. Sculpture of broad, low spiral striae and irregular growth lines. Last whorl with 11-14 spiral striae, becoming prominent basally as a keel over siphonal canal. Growth lines may produce irregular varices; in juveniles and in animals from sheltered habitats they may be raised to give frilled or imbricate surface to shell (var. *imbricata*). Aperture is oval, with short siphonal canal, partially closed by columellar fold. Outer lip curves in more or less constant arc from origin to tip of siphonal canal, with little or no inflection at base. In juveniles it is thin and crenulate, later thickening and developing internalteeth. Inner lip is reflected over columella and last whorl as a broad glaze (N. lapillus-drawing).

Size:

Up to 42 x 22 mm.

Colour:

Commonly whitish, with brown or purplish throat but a range of monochrome and striped shell forms also occur.

Animal:

Distal two thirds of cephalic tentacles narrow, with eyes at junction with broader basal portion. Foot with double-edged anterior margin, posteriorto which is the small pit of the accessory boring organ; in females the pit of the ventral pedal gland, used in depositing egg capsules, lies posteriorto this; operculum is horn-coloured, oval, with a basal nucleus.

Habitat:

Abundant on all rocky shores, from MHWNT to MLWST, less common sublittorally to 40 m. Avoids low salinities and excessive weed cover, but tolerant of a wide range of exposure.

Distribution:

Widely distributed from Straits of Gibraltar to Arctic (Distr. N. lapillus).

Feeding types:

Omnivore
Predator
Scavenger

Netted Dog Whelk
Nassarius reticulatus



Description (shell):

Shell solid, with distinct periostracum; tall, conical, with up to ten almost flat-sided whorls; spire a little cyrtconoid, slightly stepped at sutures. Sculpture of flexuous costae, strap-like spiral striae and fine growth lines. Costae numerous (20 or more on each whorl), more conspicuous on last whorl and part of penultimate whorl. Spiral striae less numerous (about thirteen on last whorl, five or six on whorls of spire), interacting with costae to produce raised, block-like reticulation, particularly conspicuous on spire. A deep spiral channel runs from base of siphonal canal to umbilical region of columella, below it a boss bearing four to six thin spiral striae. Aperture oval, with slight anal sinus and short, deep, markedly oblique siphonal canal. Outer lip arises tangential to last whorl, curving without inflection to tip of siphonal canal; thickened in mature shells, with internal teeth; often with labial varix. Inner lip spread widely over parietal region of last whorl; toothed or ridged in both columella and parietal regions in mature shells (*N. reticulatus*-drawing).

Size:

Up to 30 x 14 mm.

Colour:

Cream or buff, often with darker subsutural bands; periostracum imparts a tan colour to live shells, though often discoloured by sulphides in sediments.

Animal:


Cephalic tentacles slender, each with a short, thickened basal portion bearing the eye. Siphon long (about half the shell length), held aloft in active animals. Foot long, with double-edged anterior and recurved anterio-lateral horns; posterior tip with slight fork and two metapodial tentacles. Operculum small, oval, with a frilled margin (*N. reticulatus*-animal).

Habitat:

Common near LWST, in sedimentary areas of rocky shores and sublittorally on soft substrata down to 15 m; often covered in sediment, with only siphon exposed.

Distribution:

Distributed from Canaries and Azores to Norway; common in the North Sea (*Distr. N. reticulatus*).

| | |
|---|--|
| <p>Sting Whelk <i>Ocenebra erinacea</i></p>  | <p>Description (shell): Shell a tall, turreted, sharply pointed cone of up to eight tumid whorls. Sutures are deep and sinuous. Sculpture of strong, buttress costae, cord-like spiral striae and growth lines. Costae with marked shoulder, in mature shells coming to lie adapical to suture; eight or nine costae on penultimate whorl, increasing in number up the spire. Spiral striae of variable size; two or three prominent striae on penultimate whorl, eight or nine on last whorl, with minor striae in between; striae are slightly swollen where they cross costae. Growth lines are numerous, raised to produce finely laminate surface to shell. Aperture is oval, siphonal canal long, equal to aperture height; open and slightly curved in juveniles, closed over in mature shells. Outer lip thin, crenulate in young shells, often with hollow varix behind and internally grooved; thickened internally in mature shells.</p> <p>Size: Up to 50 x 25 mm.</p> <p>Colour: Cream coloured, often with rusty brown patches (<i>O. erinacea</i>-drawing).</p> <p>Animal: Body yellowish-white, with white flecks. Distal third of cephalic tentacles slender, with eyes at junction with broader basal portion. Foot similar to that of <i>Nucella lapillus</i>.</p> <p>Habitat: On rocky shores, in silty crevices and beneath stones from LWST to 150 m; intertidal range increased in summer.</p> <p>Distribution: Distributed from the Azores and Mediterranean; in the North Sea restricted to the British coast, becoming rare in north (Distr. <i>O. erinacea</i>).</p> <p>Feeding types: Omnivore Predator Scavenger</p> |
|---|--|

Spindle Whelk
Neptunea antiqua



Description (shell):

Shell with tall, coeloconoid spire of seven tumid whorls. Protoconch is rather bulbous, last whorl about 70-80 % of shell height. Sutures are shallow, slightly accentuated by a narrow subsutural ridge, more conspicuous on last whorl where it is seen to derive from anal sinus. Periostracum is thin, often lost in older shells. Sculpture of numerous, fine spiral striae and flexuous growth lines. A thick spiral keel, the siphonal fasciole, runs from shell base to umbilical region. Aperture is broadly oval or egg-shaped, pointed apically, with small anal sinus; basally a short, broad siphonal canal (N. antiqua-drawing).

Size:

Commonly up to 200 x 50 mm, occasionally up to twice this size.

Colour:

Yellowish, sometimes with reddish tinge, throat usually more heavily pigmented.

Animal:

Cephalic tentacles are long, distal half slender, eyes at junction with broader basal portion. Siphon does not project far from canal in active animals. Foot is large, with double-edged anterior margin and small anterio-lateral horns; females with opening of ventral pedal gland on sole. Operculum is oval, pointed apically, with a terminal nucleus.

Habitat:

Sublittoral, from 15-1200 m; mainly on soft substrata.

Distribution:

Widely distributed from Biscay to Arctic; found in the whole North Sea (Distr. N. antiqua).

Feeding types:

Omnivore
Predator
Scavenger

Common Whelk
Buccinum undatum



Description (shell):

Shell solid, mature individuals especially robust and heavy; periostracum hispid in juveniles, missing from most of shell in adults. Spire of seven or eight tumid whorls, last whorl large (about 70 % of shell height); sutures deep. Sculpture of strong crescentic costae, spiral striae and prosocline growth lines. Costae do not extend to base of last whorl; 12-15 on penultimate whorl. Spiral striae numerous, major ridges separated by variable number of minor ridges to form a regular pattern; interaction with growth lines produces fine reticulation. A thick spiral keel, the siphonal fasciole, runs from base of shell to umbilical region. Aperture broadly oval, tapering apically to a point; outer lip describes a high arc to tip of short, siphonal canal. Inner lip reflected over columella and large area of parietal region of last whorl (B. undatum-drawing 2); (B. undatum-with eggs).

Size:

Up to 110 x 68 mm.

Colour:

Buff, with darker bands above and below periphery; throat and peristome white (B. undatum-drawing).

Animal:

Cephalic tentacles long, distal portion slender, eyes at junction with broader basal portion. Siphon extends a long way from canal in active animals. Foot large, shield-shaped, with double-edged anterior margin; females with opening of ventral pedal gland on sole; operculum oval, with central nucleus (B. undatum-animal).

Habitat:


On hard and soft substrata, occasionally at LWST, but usually sublittoral down to 1200 m. Tolerates brackish water to 15‰.

Distribution:

Distributed from Iceland and northern Norway to the Bay of Biscay; common and often abundant (Distr. B. undatum).

Feeding types:

Omnivore
Predator
Scavenger

| | |
|--|---|
| <p>Acteon <i>Acteon tornatilis</i></p>  | <p>Description (shell); Shell solid, glossy, ridged transversely, with longitudinal lines sometimes visible; opaque, aperture two-thirds of shell height, a peg on innercolumella (A. tornatilis-drawing).</p> <p>Size: Up to 25 mm long.</p> <p>Colour: Varying shades of pink with white bands, each with a narrow darker pink edge on either side; two white bands on body whorl, one on each of otherwhorls.</p> <p>Animal: Operculum triangular, transparent, amber coloured and with fine lines diffusing from edge. Body creamy white, large and fleshy, completely retractable into the shell. Foot and head divided anteriorly; head with large lobes, foot with small, blunt propodial tentacles (A. tornatilis-animal).</p> <p>Habitat: Burrows in clean, rather fine but not silty, sand, below MTL and in the shallow sublittoral. It has been observed to feed on the polychaetes <i>Lanice conchilega</i> and <i>Owenia fusiformis</i>. It is most easily captured on a rising tide, when the animals burrow along the surface leaving a characteristic trail in the sand.</p> <p>Distribution: Common in the North Sea, in sheltered sandy bays (Distr. A. tornatilis); further distribution from Iceland, Faroes, Shetland, Norway and Atlantic coasts of France to the Mediterranean Sea (as far as the Aegean).</p> <p>Feeding types: Carnivore Omnivore Predator Scavenger</p> |
|--|---|

Painted Top Shell
Calliostoma zizyphinum



Description (shell):

Shell regularly conical, straight-sided, up to 12-13 whorls; sculpture of regular spiral grooves and ridges traversed by fine prosocline growth lines. Last whorl with prominent peripheral keel bearing two broad ridges; ridges above suture in preceding whorls. Base of shell rather flat, inner lips reflected over shallow umbilical groove (*C. zizyphinum*-drawing).

Size:

Up to 30 x 30 mm.

Colour:

Variable. Yellowish, pale pink, or violet with streaks and blotches of brown, red or purple. Blotches on keel generally darker, more frequent and more regular than on other parts of shell. Pure white or violet specimens occasionally found.

Animal:

Head with papillate snout and finely papillate tentacles; mouth T-shaped when closed. Foot with anterior pedal gland, transversely ridged sole and papillate sides; four or five pairs of epipodial tentacles, lacking basal sense-organ. Operculum polygyrous (about 15 turns), shallowly concave.

Habitat:

Below LWNT on weed covered rocky shores, extending sublittorally on hard and soft bottoms to 300 m; tolerant of salinities down to 21 ‰.

Distribution:

Distributed from Mediterranean, Canaries and Azores to Norway. All British and Irish shores, Helgoland (Distr. *C. zizyphinum*).

Flat Top Shells
Gibbula species



Description (shell):

Shell similar to *Gibbula cineraria* but distinguished by a markedly cyrtoid shape (especially in older shells), a more angular last whorl (especially in younger shells), fewer (8-11) spiral ridges on base of last whorl and larger and more circular umbilicus (*G. umbilicalis*-drawing). Non-umbilicate forms have been recorded from south-east Cornwall and south-west Devon.

Size:

Up to 16 x 22 mm.

Colour:

Cream or greenish background colour with broad stripes or bands of red or reddish-purple.

Animal:


Body similar to *Gibbula cineraria*; papillae fringing foot more pronounced.

Habitat:

Habitat similar to that of *Gibbula cineraria*, with which it is often found; More tolerant of emersion and therefore exhibits higher vertical zonation (MHWS - MLWS).

Distribution:

A more southern species than *Gibbula cineraria*, extending along Atlantic coast of France and west coast of Britain, Ireland, and northwards to Orkney. Absent from North Sea and British coasts in eastern basin of Channel (Distr. *G. umbilicalis*).

| | |
|--|---|
| <p>Rough Periwinkle <i>Littorina saxatilis</i></p>  | <p>Description (shell): Shell solid, opaque, with three or four tumid whorls. Sculpture variable, either with strong V-shaped spiral striae, often symmetrical in profile, or with fine spirals giving a superficially smooth appearance. Aperture large, rounded, outer lip everted where it meets columella but not forming prominent spout. No umbilicus or umbilical groove (L. saxatilis-drawing).</p> <p>The taxonomy of the <i>L. saxatilis</i> complex (<i>nigrolineata</i>, <i>neglecta</i>, <i>arcana</i>, <i>saxatilis</i>, <i>rudis</i> and <i>tenebrosa</i>) has received a great deal of attention over a number of years and while the separation of <i>Littorina nigrolineata</i>, <i>Littorina neglecta</i> and <i>Littorina arcana</i> from <i>L. saxatilis</i> has achieved general approval, there is still some uncertainty as to the relationship and status of the residual trio of <i>L. saxatilis</i>, <i>Littorina rudis</i> and <i>Littorina tenebrosa</i>. (L. sax. tenebrosa).</p> <p>Size: Up to 18 x 14 mm.</p> <p>Colour: Colour variable, usually with some pattern (tessellation or spiral lines) and with dark throat.</p> <p>Animal: Ovoviviparous. Extensive ciliary field (red in live animals) between genital tract and edge of columella muscle; prostate extends beyond anus, penis with elongate tip and variable number (4-26) of small glands arranged in one or two rows along its length but rarely extending to its curved base.</p> <p>Habitat: In the <i>Pelvetia</i> zone and above, in crevices and empty barnacle shells.</p> <p>Distribution: Widely distributed, from Mediterranean to Arctic (Distr. <i>L. saxatilis</i>).</p> <p>Feeding types: Deposit feeder: subsurface, gazer</p> |
|--|---|

Edible Periwinkle
Littorina littorea



Description (shell):

Shell solid, with five or six slightly tumid whorls; sutures shallow, in some specimens upper whorls may be flat-sided or even coeloconoid. Spireprominent, pointed, more so in young shells, though last whorl may occupy up to 85 % of shell height. Shell may appear smooth, especially in older specimens, but has prosocline growth lines and numerous, slightspiral ridges; latter may be strap-like on last whorl. Aperture ear-shaped, outer lip arising tangential to last whorl; inner lip thick, reflected over base of columella. No umbilicus or umbilical groove (L. littorea-drawing).

Size:

Up to 32 x 25 mm.

Colour:

Generally black or dark grey-brown, often lighter towards apex, with heavier pigmentation between spiral ridges; occasional red, orange, or white individuals occur. Columella region white, outer lip with a darkly pigmented band internally, contrasting with lighter pigmentation of throat.

Animal:

Cephalic tentacles rather flat and broad, with many transverse black stripes and, ventrally, a single longitudinal line. Foot and operculum of typical littorinid pattern.

Habitat:

Common on all but the most exposed rocky shores; mainly intertidal, the upper range increasing with exposure, but extends sublittorally to 60 m in the north. In sheltered conditions it may be found undertaking feeding excursions over muddy shores; tolerant of brackish water.

Distribution:

Distributed from northern Spain to White Sea. On all British coasts, Dutch coast and Helgoland, though rare or absent in Isles of Scilly and Channel Isles (Distr. L. littorea).

Feeding types:

Deposit feeder: subsurface, gazer

Pelican Foot Whelk
Aporrhais pespelecani



Description (shell):

Shell of mature animals readily distinguished by palmate extension to the outer lip; no such extension in shells with less than eight whorls. Spire tall, whorls tumid, with crescentic costae and fine, flat spiral striae; apical whorls finely decussate or with spiral striae only. Last whorl of mature animals with three prominent spiral ridges set with stout tubercles; ridges extend on to palmate outer lip but are not tuberculate at this point. Aperture in mature shells dominated by palmate outer lip; uppermost process fuses with lower part of spire, extending to antepenultimate whorl; basal process curved upward towards aperture (in juveniles this is the only process and resembles a sharply pointed siphonal canal).

Size:

Up to 4.2 x 2.8 cm.

Colour:

Cream or sandy coloured, sometimes with purplish stain on back of last whorl; apertural surfaces pearly white (*A. pespelecani*-drawing).

Animal:

Snout long; cephalic tentacles long, cylindrical, with eyes on lateral bulges at base; males with thick, tentaculiform penis behind right tentacle. Foot with double-edged anterior margin; operculum elongate-oval, set across the foot.

Habitat:

Sublittoral; locally common on mud and muddy sand to 180 m.

Distribution:

Distributed from Mediterranean to northern Norway and Iceland; not common (Distr. *A. pespelecani*).

Feeding types:

Deposit feeder: subsurface, gazer

Data source:

<http://species-identification.org/index.php>

<http://www.marinespecies.org/index.php>

Pictures: Coastwatch